Exhibit 14.6

NOTABLE ROOSTS FOR THE INDIANA BAT (*MYOTIS SODALIS*)

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Abstract

During the field season of 2001, Ecological Specialties, LLC performed an investigation to determine the status of the Federally listed endangered Indiana bat (*Myotis sodalis*) on a project for a proposed concrete facility in Ste. Genevieve County, Missouri. During the period of 26 June through 15 August of 2001, 28 sites were mist netted. A total of 94 bats were captured representing six bat species. During the survey, 18 Indiana bats were captured, representing 19% of the total bat captures (Hendricks et al. 2001). During the summer of 2002, Ecological Specialties, LLC conducted a survey for a coal mine in McDonough County, Illinois. During the second and third weeks in June of 2002, two sites were mist netted. A total of 13 bats were captured, two of which were Indiana bats. The Indiana bat captures represented approximately 15% of the total capture for the survey (Hendricks 2002). During the summer of 2004, an Indiana bat survey was conducted as part of the proposed I-69 Section 6 corridor in Indiana. During the period of the second and third weeks in July of 2004, a total of 254 bats were captured, ten of which were Indiana bats (Hendricks et al. 2004).

Missouri Roosts

During the summer of 2001, Ecological Specialties, LLC conducted an endangered species survey for the proposed concrete facility for Holcim Inc. The majority of the study area was located in Ste. Genevieve County, slightly south of Saint Louis. The study area was approximately 3,900 acres in size. A total of 28 sites were mist netted during the period of 26 June through 15 August of 2001 (Hendricks et al. 2001).

A total of 94 bats were captured from the 28 sites during the survey. The six species captured consisted of big brown bats (*Eptesicus fuscus*, n=2), eastern red bats (*Lasiurus borealis*, n=12), northern long-eared bats (*Myotis* septentrionalis, n=48), Indiana bats (*Myotis sodalis*, n=18), evening bats (*Nycticeius humeralis*, n=10), and eastern pipistrelle bats (*Pipistrellus subflavus*, n=4). Eighteen Indiana bats were captured, 12 female and 6 male, yielding approximately 19% of the total captures (Hendricks et al. 2001).

The first roost found during the study was a large maternity roost found across the Mississippi River. The radio-tagged lactating females were tracked, going from the Beagle Island roost in Illinois, flying across the Mississippi River, to forage in the uplands of the Holcim site in Missouri. The roost was located in a dead Cottonwood (*Populus deltoides*) snag (Figure 1). On 2 July of 2001, 138 bats were counted emerging from the roost tree. The second emergence count taken on 15 July of 2001, 230 bats were counted emerging from the roost tree. The difference in numbers may be attributed to newly volant young. The final count taken in August of 2001 yielded no bats (Hendricks et al. 2001).

The second maternity roost found during this survey, was found in a wooden telephone/power pole (Figure 2&3). The top of the pole was split open where the large bolt was used to attach the upper insulator. The bats were seen emerging out of the roost from this split. In July of 2001, 17 bats were counted emerging from this roost on the first night. The second count, conducted in the middle of July, 2001, yielded 15 bats. A final count, taken in October of 2001, yielded 5 bats emerging from the roost. This roost is believed to be the first documented record of a maternity roost in a power pole (Hendricks et al., 2001).

A single male Indiana bat was tracked to the third roost found during this survey. This roost tree was located approximately thirty yards from an active railroad track (Figure 4). Three bats were counted emerging from this roost tree on this first night of emergence counts. The following night, the radio-tagged male moved to a second

roost on the second night. A total of 21 bats were counted emerging from this second roost. Twelve additional bats were counted emerging from a tree adjacent to the second male roost found as well (Hendricks et al. 2001).

Illinois Roosts

During the summer of 2002, Ecological Specialties, LLC conducted an endangered species survey for the Freeman United Coal Company, located near the small town of Industry, Illinois. The survey area was located in portions of both McDonough and Schuyler counties in northwestern Illinois. During the first sampling effort, two sites were mist netted between 13 June and 15 June of 2002. The second area sampled also consisted of two mist net sites that ran along the Grindstone Creek. The second sites were mist-netted later, due to prior heavy rainfall, between 20 and 22 June of 2002 (Hendricks 2002).

A total of thirteen bats were captured during the survey. Eastern red bats (*Lasiurus borealis*, n=8), northern-long-eared bats (*Myotis septentrionalis*, n=2), Indiana bats (*Myotis sodalis*, n=2), and eastern pipistrelle bats (*Pipistrellus subflavus*, n=1) were the four species captured. Two gravid female Indiana bats were captured, radio-tagged, and tracked, making approximately 15% of the total captures (Hendricks 2002).

One maternity roost was located during this survey; both females were tracked to the same maternity roost along the edge of a bottomland clearing adjacent to Grindstone Creek. The roost was located in a dead American Elm (*Ulmus americana*) (Figure 5). The tree exited along a property boundary and was most likely deadened by a bulldozer upon clearing the property line. Forty-six bats were counted emerging from the roost. This was the first maternity roost found on an active mine in Illinois (Hendricks 2002).

Indiana Roosts

During the summer of 2004, Ecological Specialties, LLC conducted an endangered survey for the proposed I-69 section 6 corridor between Indianapolis and Martinsville, Indiana. The survey area was located in portions of Morgan, Johnson, and Marion counties. The length of the project was approximately 25 miles running along the existing Highway 37. A total of 29 sites were chosen to be mist netted, between 14 July and throughout the survey area (Hendricks et al. 2004).

A total of 254 bats were captured from the 29 net sites. The 254 individuals represented seven species consisting of big brown bats (*Eptesicus fuscus*, n=66), eastern red bats (*Lasiurus borealis*, n=25), northern long-eared bats (*Myotis septentrionalis*, n=21), Indiana bats (*Myotis sodalis*, n=10), little brown bats (*Myotis lucifugus*, n=72), evening bats (*Nycticeius humeralis*, n=29), and eastern pipistrelle bats (*Pipistrellus subflavus*, n=31). Ten Indiana bats were captured, six were female and four were males. Of the six females captured, five bats were radio-tagged and tracked. No males were tagged or tracked per guidelines of the study (Hendricks et al. 2004).

The first maternity roost found during our survey was located approximately 150 yards from the centerline of the existing Highway 37 (Figure 6). The roost was located in what appeared to be a Cottonwood (*Populus deltoides*) snag. The first night the roost was observed, a total 64 bats were counted emerging (Hendricks et al., 2004).

The second maternity roost found was located a large power pole (Figure 7). A total of 110 bats were counted emerging from this roost on the first night. The majority of the bats emerged from the lowest section of the left pole. The poles were wrapped in a form of black plastic sheeting, which was used to protect the poles from woodpecker damage. The bats were roosting underneath between the pole and the plastic sheeting. The following day, the radio-tagged female relocated to an alternate roost about 300 yards north-northeast of the pole. Twenty-nine bats were counted emerging from the second/alternate roost the following night. The alternate roost was located in a live Hickory (*Carya sp.*) tree. Upon emerging from the roost the bats seemed to head toward the power line corridor uphill (Hendricks et al. 2004).

The final roost located during this study was found in a dead Elm (*Ulmus sp.*), along the floodplain of the White River (Figure 8). The location of the roost was surrounded by agricultural land. A total of 15 bats were counted emerging from this roost (Hendricks et al. 2004).

Summary and Conclusion

The roosts information compiled both what is thought to be typical and non-typical roosts. The endangered species survey conducted in 2001, for the proposed Holnam (Holcim) Inc. concrete facility in Missouri, provided new and unusual insights about Indiana bat maternity roosts. Radio-tagged female Indiana bats were found roosting in Illinois, crossing the Mississippi River nightly, and foraging in Missouri. Ecological Specialties, LLC documented what is thought to be the first maternity roost found in a telephone/power pole. The same roost was the first maternity roost found south of the Missouri River in Missouri as well. The male roost, from the Holcim Inc. survey, was found within approximately thirty yards of an active railroad track (Hendricks et. al. 2001).The survey conducted for the Freeman United Coal Company during the summer of 2002, revealed the first Indiana bat maternity roost found on an active mine in Illinois (Hendricks and Alverson 2002). The survey conducted during the summer of 2004, as part of the I-69 expansion project uncovered a maternity roost located in a power pole in Indiana. Another roost found during the I-69 survey was located approximately 150 yards from the centerline of the existing highway 37, the proposed route for I-69 (Hendricks et al. 2004).

More and more, much attention is provided when dealing with the normal/typical maternity roost of the Indiana bat in dealing with concern for the survival and impact of them. But what about abnormal/non-typical maternity roosts? It would be interesting to know the number of man-made structures suitable for bat roosts, the number of telephone/power poles suitable for bat roosts; and, even more specifically, how many man-made structures (i.e. telephone/power poles, etc.) are suitable for and being used for Indiana bat roosts.

Literature Cited

Hendricks, W.D., R. Ijames, L. Alverson, J. Timpone, M. Muller, and N. Nelson. 2004. Unpublished report to Indiana Department of Transportation.

Hendricks, W.D., L. Alverson. 2002. Indiana bat survey for Freeman United Mining, Industry Mine. 12 pp.

Hendricks, W.D., J. Smelser, L. Alverson, M. Muller. 2001. An Endangered species investigation: Holnam, Inc. Lee Island Project. 17pp.

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Figures

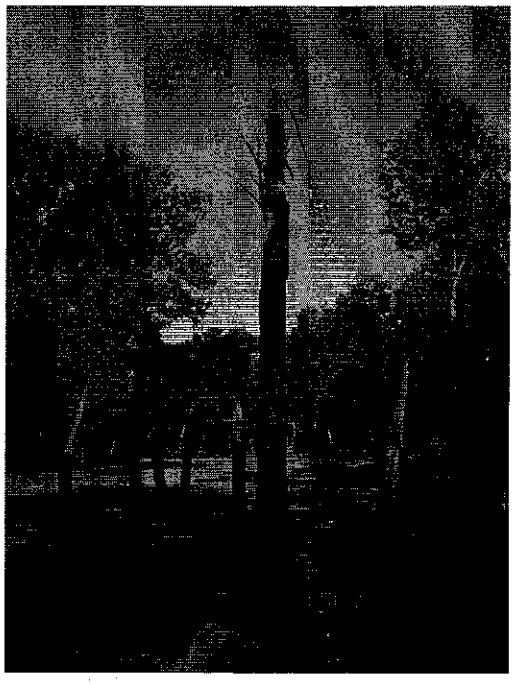

Figure 1. Indiana bat maternity roost on island in Mississippi River.

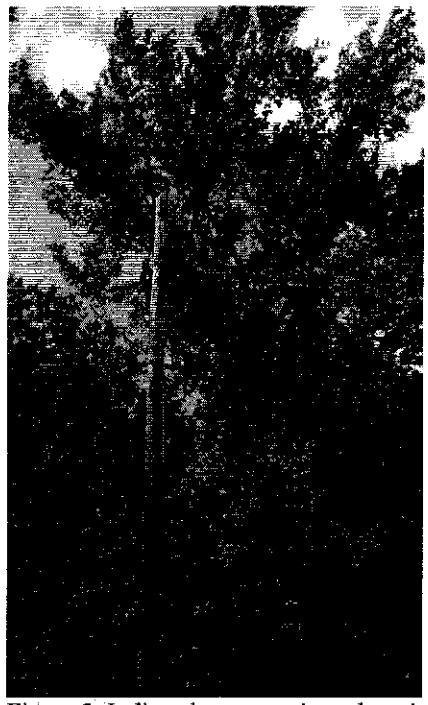

Figure 2. Indiana bat maternity colony in A telephone pole in Missouri.

Figure 3. Close-up of Missouri Indiana bat maternity colony roost.

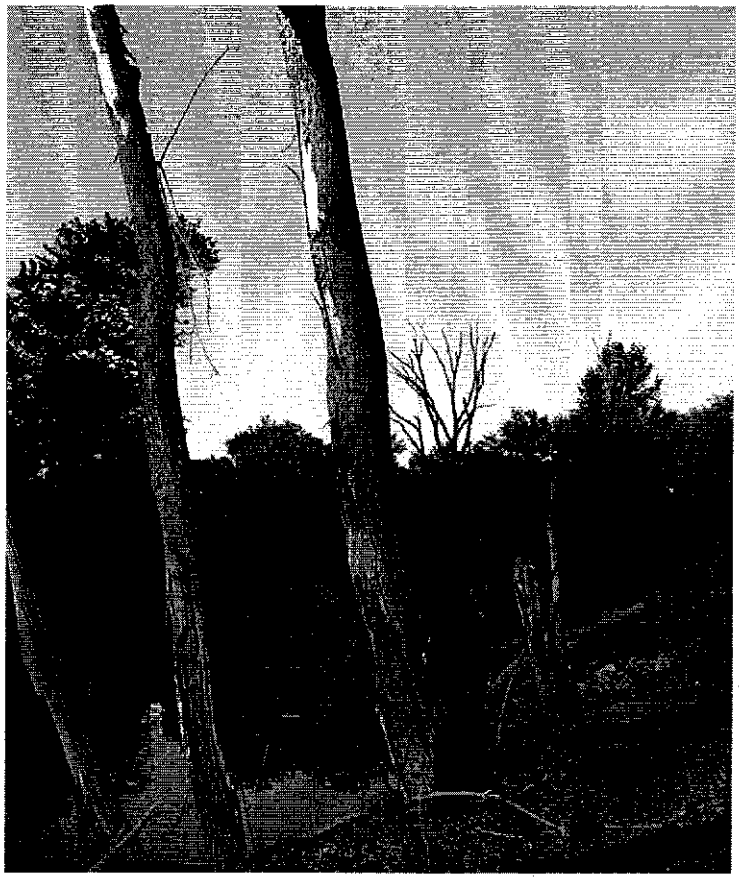

Figure 4. Male roost adjacent to railroad tracks in Missouri.

Figure 5. Indiana bat maternity roost at the Freeman Mine in Illinois.

Figure 6. Indiana bat maternity roost in Southern Indiana.

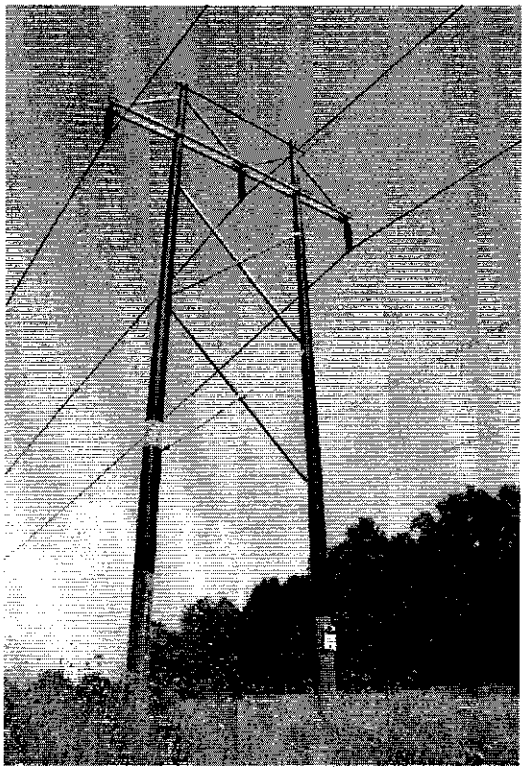

Figure 7. Maternity roost of the Indiana bat underneath plastic on power pole.

Figure 8. Maternity roost of the Indiana bat in a Fencerow adjacent to agricultural fields.